

Amendments to the Claims

Please cancel Claims 2, 3, 13 and 14 without prejudice to or disclaimer of the subject matter recited therein.

Please amend Claims 1, 4-12 and 15-22 to read as follows.

1. (Currently amended) An inkjet printing method using a printing head having a plurality of nozzles capable of ejecting ink for printing an image by ejecting ink based on printing data which ~~instructing~~ instructs ejection or non-ejection of ink, the plurality of nozzles being aligned next to each other along a predetermined direction, wherein

~~said~~ the printing data corresponding to an abnormal nozzle malfunctioning in ink-ejection is added to the printing data corresponding to a neighboring nozzle of the abnormal nozzle,

when an N-th nozzle of the plurality of nozzles is an abnormal nozzle, a neighboring printing area neighboring a printing area to be printed by the N-th abnormal nozzle is printed by using an (N-M)-th neighboring nozzle and an (N+M)-th neighboring nozzle (where N and M are positive integers) arranged in the neighborhood of the N-th abnormal nozzle based on the printing data corresponding to the N-th abnormal nozzle, and

the printing data corresponding to the N-th abnormal nozzle is alternately added to the printing data corresponding to the (N-M)-th neighboring nozzle and the

(N+M)-th neighboring nozzle every time the printing data corresponding to the N-th abnormal nozzle is present.

Claims 2 and 3 (cancelled)

4. (Currently amended) An inkjet printing method ~~as claimed in claim 2~~ using a printing head having a plurality of nozzles capable of ejecting ink for printing an image by ejecting ink based on printing data which instructs ejection or non-ejection of ink, the plurality of nozzles being aligned next to each other along a predetermined direction, wherein

the printing data corresponding to an abnormal nozzle malfunctioning in ink-ejection is added to the printing data corresponding to a neighboring nozzle of the abnormal nozzle,

when an N-th nozzle of the plurality of nozzles is an abnormal nozzle, a neighboring printing area neighboring a printing area to be printed by the N-th abnormal nozzle is printed by using an (N-M)-th neighboring nozzle and an (N+M)-th neighboring nozzle (where N and M are positive integers) arranged in the neighborhood of the N-th abnormal nozzle based on the printing data corresponding to the N-th abnormal nozzle,

the printing data corresponding to the N-th abnormal nozzle is added to the printing data corresponding to the (N-M)-th neighboring nozzle and the (N+M)-th neighboring nozzle, and

a ratio of the printing data corresponding to the N-th abnormal nozzle to be added to the printing data corresponding to the (N-M)-th neighboring ~~nozzles~~ nozzle and the (N+M)-th neighboring nozzle is determined based on states which are responsive to the ink-ejection property of the (N-M) th neighboring ~~nozzles~~ nozzle and the (N+M) neighboring nozzle.

5. (Currently amended) An inkjet printing method as claimed in claim 4, wherein

~~said~~ the states of the neighboring nozzles are obtained from ~~a shooting~~ ejection information based on a landing ~~result~~ results of ink ejected ~~out of from~~ the neighboring ~~nozzle~~ nozzles on a printing medium.

6. (Currently amended) An inkjet printing method as claimed in claim 5, wherein

~~said shooting~~ the ejection information includes at least one of information about the landing ~~position~~ positions of ink on the printing medium and the ~~diameter~~ diameters of ~~dot~~ dots formed by ink landed on the printing medium.

7. (Currently amended) An inkjet printing method ~~as claimed in claim 1, wherein;~~ using a printing head having a plurality of nozzles capable of ejecting ink for printing an image by ejecting ink based on printing data which instructs ejection or

non-ejection of ink, the plurality of nozzles being aligned next to each other along a predetermined direction, wherein

the printing data corresponding to an abnormal nozzle malfunctioning in ink-ejection is added to the printing data corresponding to a neighboring nozzle of the abnormal nozzle,

when an N-th nozzle of the plurality of nozzles is an abnormal nozzle, a neighboring printing area neighboring a printing area to be printed by the N-th abnormal nozzle is printed by using an (N-M)-th neighboring nozzle and an (N+M)-th neighboring nozzle (where N and M are positive integers) arranged in the neighborhood of the N-th abnormal nozzle based on the printing data corresponding to the N-th abnormal nozzle, and

when the printing data corresponding to the N-th abnormal nozzle is added to that corresponding to the (N-M)-th neighboring nozzle and the (N+M)-th neighboring nozzle, a printing resolution of the printing head is improved.

8. (Currently amended) An inkjet printing method as claimed in claim 1, wherein

an image is completely printed in a predetermined area of ~~the~~ a printing medium by a single movement of the printing head relative to the printing medium while ink is ~~being~~ ejected out of the ~~nozzle~~ nozzles of the printing head based on the printing data.

9. (Currently amended) An inkjet printing method as claimed in claim 1, wherein

an image is completely printed in a predetermined area of ~~the~~ a printing medium by ~~moving~~ a single movement of a single printing head relative to the printing medium while ink is ~~being~~ ejected from ~~nozzle~~ the nozzles of the single printing head based on the printing data.

10. (Currently amended) An inkjet printing method as claimed in claim 1, wherein

~~said~~ the manner of adding the printing data corresponding to the abnormal nozzle to that corresponding to the neighboring ~~nozzle~~ nozzles is varied depending upon a type of printing medium.

11. (Currently amended) An inkjet printing method as claimed in claim 1, further comprising the steps of:

printing a detection pattern on a printing medium by using the printing head, the detection pattern being for use in detecting the state of the ~~nozzle~~ nozzles; and

detecting the abnormal nozzle based on the detection pattern printed on the printing medium.

12. (Currently amended) An inkjet printing apparatus for printing an image by use of a printing head having a plurality of nozzles capable of ejecting ink and by

ejecting ink out of the nozzles based on printing data which ~~instructing~~ instructs ejection or non-ejection of ink, the plurality of nozzles being aligned next to each other along a predetermined direction, comprising:

compensation means for adding the printing data corresponding to an abnormal nozzle malfunctioning in ink-ejection state ~~ink-ejection state~~ ink-ejection to the printing data corresponding to a neighboring nozzle arranged in the neighborhood of the abnormal nozzle,

wherein when an N-th nozzle of the plurality of nozzles is an abnormal nozzle, a neighboring printing area neighboring a printing area to be printed by the N-th abnormal nozzle is printed by using an (N-M)-th neighboring nozzle and an (N+M)-th neighboring nozzle (where N and M are positive integers) arranged in the neighborhood of the N-th abnormal nozzle based on the printing data corresponding to the N-th abnormal nozzle, and

the printing data corresponding to the N-th abnormal nozzle is alternately added to the printing data corresponding to the (N-M)-th neighboring nozzle and the (N+M)-th neighboring nozzle every time the printing data corresponding to the N-th abnormal nozzle is present.

Claims 13 and 14 (cancelled)

15. (Currently amended) An inkjet printing apparatus ~~as claimed in claim 13, wherein~~ using a printing head having a plurality of nozzles capable of ejecting

ink for printing an image by ejecting ink based on printing data which instructs ejection or non-ejection of ink, the plurality of nozzles being aligned next to each other along a predetermined direction, comprising:

compensation means for adding the printing data corresponding to an abnormal nozzle malfunctioning in ink-ejection to the printing data corresponding to a neighboring nozzle of the abnormal nozzle,

wherein when an N-th nozzle of the plurality of nozzles is an abnormal nozzle, a neighboring printing area neighboring a printing area to be printed by the N-th abnormal nozzle is printed by using an (N-M)-th neighboring nozzle and an (N+M)-th neighboring nozzle (where N and M are positive integers) arranged in the neighborhood of the N-th abnormal nozzle based on the printing data corresponding to the N-th abnormal nozzle,

the printing data corresponding to the N-th abnormal nozzle is added to the printing data corresponding to the (N-M)-th neighboring nozzle and the (N+M)-th neighboring nozzle, and

said compensation means determines a ratio of the printing data corresponding to the N-th abnormal nozzle to be added to the printing data corresponding to the (N-M)-th neighboring ~~nozzles~~ nozzle and the (N+M)-th neighboring ~~nozzle~~ based on states which are responsive to the ink-ejection property of the (N-M)-th neighboring ~~nozzles~~ nozzle and the (N+M)-th neighboring ~~nozzle~~.

16. (Currently amended) An inkjet printing apparatus as claimed in claim 15, wherein

~~said~~ the states of the neighboring nozzles are obtained from ~~the shooting~~ ejection information of ink ejected ~~out of~~ from the neighboring nozzles and landed on a printing medium.

17. (Currently amended) An inkjet printing apparatus as claimed in claim 16, wherein

~~said shooting~~ the ejection information includes at least one of data about the landing ~~position~~ positions of ink on the printing medium and the ~~diameter~~ diameters of ~~dot~~ dots formed by ink landed on the printing medium.

18. (Currently amended) An inkjet printing apparatus ~~as claimed in~~ claim 12, further comprising: using a printing head having a plurality of nozzles capable of ejecting ink for printing an image by ejecting ink based on printing data which instructs ejection or non-ejection of ink, the plurality of nozzles being aligned next to each other along a predetermined direction, comprising:

compensation means for adding the printing data corresponding to an abnormal nozzle malfunctioning in ink-ejection to the printing data corresponding to a neighboring nozzle of the abnormal nozzle, wherein when an N-th nozzle of the plurality of nozzles is an abnormal nozzle, a neighboring printing area neighboring a printing area to be printed by the N-th abnormal nozzle is printed by using an (N-M)-th neighboring nozzle

and an (N+M)-th neighboring nozzle (where N and M are positive integers) arranged in the neighborhood of the N-th abnormal nozzle based on the printing data corresponding to the N-th abnormal nozzle; and

means for improving a printing resolution of the printing head when the printing data corresponding to the N-th abnormal nozzle is added to that corresponding to the (N-M)-th neighboring nozzle and the (N+M)-th neighboring nozzle.

19. (Currently amended) An inkjet printing apparatus as claimed in claim 12, further comprising:

means for completely printing an image in a predetermined area on ~~the~~ a printing medium by a single movement of the printing head relative to the printing medium while ink is ~~being~~ ejected from the nozzles of the printing head based on the printing data.

20. (Currently amended) An inkjet printing apparatus as claimed in claim 12, further comprising:

means for completely printing an image in a predetermined area on ~~the~~ a printing medium by ~~moving~~ a single movement of a single printing head relative to the printing medium while ink is ~~being~~ ejected from the nozzles of the single printing head based on the printing data.

21. (Currently amended) An inkjet printing apparatus as claimed in claim 12, wherein

said compensation means ~~add~~ adds the printing data corresponding to the abnormal nozzle to that corresponding to the neighboring ~~nozzle~~ nozzles in a different manner depending upon ~~the~~ a type of ~~the~~ printing medium.

22. (Currently amended) An inkjet printing apparatus as claimed in claim 12, further comprising:

control means for printing a detection pattern on a printing medium by using the printing head, the detection pattern being for use in detecting the state of the ~~nozzle~~ nozzles, and

detection means for detecting the abnormal nozzle based on the detection pattern printed on the printing medium.